

REMARKS

By this Response, No claims have been amended, added, or canceled. Claims 19-20 are withdrawn. Claims 1-3 and 5-16, 19 and 20 remain pending.

Advisory Action

In the Advisory Action, the Examiner asserts that the claimed subject matter is neither expressly nor inherently disclosed. The Examiner refers to portions of the specification to support this assertion; however, the selections pointed out by the Examiner omit other more pertinent portions of the specification.

Specifically, it seems to be the Examiner's position that there is no express or inherent disclosure indicating that the barrier layer 70 is formed to a thickness X_1 on an upper surface within the trench.

In traversal, it is Applicants position that express support for this recitation is found at least on page 4, lines 5-12 which recite "A low K dielectric layer is formed over a semiconductor. Trenches are formed in the dielectric layer and a first contiguous barrier layer is formed in the trenches using ALD, CVD, or PVD. The thickness of the barrier layer of the upper surface of the low K dielectric layer is X_1 and the thickness of the barrier layer formed along the sidewalls of the trenches is X_2 where X_1 is greater than X_2 ". Page 8, lines 4-5 and page 12, lines 4-5 of the original specification literally state that the contiguous liner layer (or barrier layer) is formed in the trenches. Page 8, lines 13-15 further states "In an embodiment X_1 represents the thickness of the non-conformal layer 70 formed over the upper surface 35 of the low K dielectric layer 20". Although not labeled, the trench will also include an upper surface of the low K dielectric

layer which is distinct from the sidewalls of the trench. Since the Figures clearly depict the layer 70 over the low K dielectric layer 20 within the trench, and the sidewalls of the trench are described separately, and only two dimensions X_1 and X_2 are provided, it follows that the upper surface within the trench expressly and inherently includes the dimension X_1 . It would have been redundant to re-label this portion of the trench since it is the same as the layer 70 over the barrier 30. If the material or dimension was different, the author would have labeled it as such. The specification is never contrary to the claimed features.

The Examiner's discussion regarding the deposition methodology is not persuasive since a deposition methodology suitable to obtain the claimed result will be utilized. The issues raised by the Examiner are, therefore, outside the scope of the claimed invention.

Rejection Under 35 U.S.C. § 112, First Paragraph

In the Final Office Action, the Examiner rejected claims 1-18 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed in view of the remarks presented above in connection with the Advisory Action.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-18 under 35 U.S.C. § 112, first paragraph.

CONCLUSION

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references applied against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 20-0668.

Respectfully submitted,

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